

**SECTION 16520  
EXTERIOR LUMINARIES**

**PART 1 GENERAL**

1.01 SCOPE

A. LED Street Lighting

1.02 REFERENCES

ANSI C62.41.2 Surge Protection

IEEE C62.41.2 Surge Protection

ASTM Standard B 117 Finish Testing

CALTrans 611 Vibration Testing

1.03 SUBMITTALS:

Product Data:

1. Outdoor LED Area/Site Luminaries
2. LM-80 Report
3. ARRA Certification
4. Warranty Documentation

**PART 2 PRODUCTS**

2.01 LED Street Lighting

A. Housing and General Fixture Requirements

1. Housing shall be made of cast and/or extruded low copper aluminum.
2. All exposed hardware shall be stainless steel.
3. Fixture shall be suitable to installation on 1 1/4" and 2" horizontal slipfitters with built-in facilities for up to 5-degree tilt.
4. Two bolt clamp system.
5. Electrical compartment shall be secured via two tool-less latches and shall house driver and all field electrical connections.
6. Internal level bubble affixed inside electrical compartment.
7. Fixture shall have a factory installed NEMA type photocell receptacle mounted on top of the fixture.
8. Fixture shall have a complete 5 year warranty on all components.
9. Fixture shall be ARRA Compliant

B. Electrical Requirements

1. Fixture shall utilize a universal voltage driver. Driver shall be able to be FIELD reconnected to any one of the three driver output currents (350mA, 525mA or 700mA). Fixture shall be factory connected to 525mA.
2. Drivers shall be installed on door module.
3. Factory installed three position terminal block.

4. Integral 9kV Surge suppression protection shall be standard.
5. Inline "Make/Break" wiring harness (suitable for operation under load).
6. >90% Power Factor
7. Fixture shall be UL Listed for wet locations.
8. Fixture shall be UL listed as a CLASS 1 LED device.
9. Fixture shall be available with the following control options for future expandability options:
  - a. 0 – 10V Dimming (525 or 700 mA maximum)
  - b. Dual circuit input, three level control (175mA/350mA/525mA)
10. Fixtures shall meet the following electrical consumption/lumen requirements (NEMA type 3 distribution and 525mA):
  - a. 30 LED Unit – 55W Connected Load – 3493 Lumens Delivered
  - b. 40 LED Unit – 70W Connected Load – 4658 Lumens Delivered

C. Optical Requirements

1. Fixture shall utilize a field replaceable lightbar technology (With either 10 or 20 LED's per lightbar). Fixtures shall be available in NEMA 2 Medium, 2 Short, 3 Medium, 3 Short, 4 and 5, but shall also be available with a backlight shield when required.
2. LED's shall be long life type with a 6000K color temperature and a minimum CRI of 70 (Fixture shall also be available in 4300K with little or no effect on price or light output)
3. Binning practices shall allow no more than a +/- 500K variation in color temperature for each fixture as a whole.
4. Each LED shall utilize its own optic allowing for complete redundancy in the optical distribution. Fixtures which use aimed LED's and/or fixtures using a single optic for multiple LED's are specifically NOT ALLOWED.
5. Fixture shall have an L70 rated life of no less than 90,000hours (at 25-degrees C and 525mA).

D. Finish Requirements

1. Fixture shall be finished with a multiple step finishing process.
2. Each pre-finish step shall be complete immersion to Clean, Etch and Rinse prior to the top coat.
3. Topcoat shall consist of two steps, first a E-Coat primer and then a durable powder coat finish available in multiple colors.
4. Finish shall be warranted for 10-years.

**PART 3 EXECUTION**

INSTALLATION IS NOT PART OF THIS BID

END OF SECTION